Vegetable Crop Update

A newsletter for commercial potato and vegetable growers prepared by the University of Wisconsin-Madison vegetable research and extension specialists

No. 9 – May 23, 2012

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Calendar of Events

July 13 – UW-Rhinelander Ag Research Station, Potato Tour, 10AM-2PM
July 24 – UW-Hancock Ag Research Station, Field Day, 12:30-4:00PM
August 2 – UW-Langlade County Ag Res Station Field Day Antigo, 1:00PM

Vegetable Disease Update – Amanda J. Gevens, Vegetable Plant Pathologist, UW-Madison, Dept. of Plant Pathology, 608-890-3072 (office), Email: gevens@wisc.edu.

Vegetable Pathology Webpage: http://www.plantpath.wisc.edu/wivegdis/

Current P-Day (Early Blight) and Severity Value (Late Blight) Accumulations

http://www.plantpath.wisc.edu/wivegdis/contents_pages/pday_sevval_2012.html

(NA indicates that information is not yet available as emergence has yet to occur)

Location	Planted	50% Emergence	P-Day Cumulative	DSV Cumulative	Calculation Date
Antigo Area	Early 5/1	NA	NA	NA	NA
	Mid 5/10	NA	NA	NA	NA
	Late 6/1	NA	NA	NA	NA
Grand Marsh Area	Early 4/3	5/8	82	0	5/21/12
	Mid 4/15	5/16	35	0	5/21/12
	Late 4/30	NA	NA	NA	NA
Hancock Area	Early 4/1	5/1	133	6	5/21/12
	Mid 4/15	5/10	76	0	5/21/12
	Late 5/1	5/17	32	0	5/21/12
Plover Area	Early 4/3	5/17	87	0	5/21/12
	Mid 4/19	5/18	22	0	5/21/12
	Late 5/1	NA	NA	NA	NA

P-Days and Early Blight: Earliest planted potato fields have P-Days of 82 in Grand Marsh (5/21), 133 in Hancock (5/21), and 87 in Plover (5/21). Mid-planted fields are 35, 76, and 22, consecutively on dates indicated. In the Hancock area, the latest planted fields emerged last week and P-Day accumulation is at 32. An accumulated P-Day value of 300 indicates time to initiate fungicide applications for early blight control. With a crop status that looks more like mid-June than late May due to environmental conditions, we may see early blight on leaves in the lower potato canopy earlier than usual this year.

DSVs and Late Blight: As of May 21, we had no DSV accumulation at most sites with 50% emerged potatoes. Only earliest planted potatoes in the Hancock area had accumulation of 6 DSVs. An accumulated DSV of 18 indicates time to initiate fungicide applications for late blight control.

I have not seen any symptoms of late blight in my scouting and have heard of no new reports across the U.S. this past week in fields or greenhouses. The website: http://www.usablight.org/ indicates location of positive reports of late blight in the U.S. and provides further information on disease characteristics and management.

For further information on any fungicides that may be mentioned in this newsletter, please see the 2012 Commercial Vegetable Production in Wisconsin Guide A3422. An online pdf can be found at the link below or a hard copy can be ordered through the UWEX Learning Store.

http://learningstore.uwex.edu/assets/pdfs/A3422.PDF

Fungicide registration updates

BASF's Priaxor, a combination of fluxapyroxad (Xemium, FRAC Group 7 carboxamide) and pyraclostrobin (Headline, FRAC Group 11 strobilurin or QoI), has been registered through the US EPA and with the state of WI for use on potatoes, tomatoes (and other fruiting vegetables), corn, and beans. We have trialed Priaxor and Xemium in our Hancock Agricultural Research Station early blight trials with excellent results on early blight. Both fungicides also have activity against black dot, Rhizoctonia, and white mold. The sister product for fruit is Merivon (Xemium+Headline) which also recently received EPA registration. Priaxor is in limited supply at this time, but will be for sale this season.

Valent has removed onion downy mildew (*Peronospora destructor*) from the Presidio fungicide label due to inconsistent control results. Valent is conducting further research before making commercial recommendations for Presidio for downy mildew control in onions, garlic and the other related bulb crops. Presidio (fluopicolide, FRAC Group 43) is an excellent oomycete or 'water mold' controlling fungicide with activity and label on downy mildew and phytophthora diseases of vegetables.

Vegetable Insect Update – Russell L. Groves, Vegetable Entomologist, Applied Insect Ecologist, UW-Madison, Department of Entomology, 608-262-3229 (office), (608) 698-2434 (cell), or e-mail: groves@entomology.wisc.edu.

Flea beetles - Flea beetles are again becoming numerous in several fresh and direct market operations. These insects are one of the most difficult-to-manage pests of young tomato, eggplant and cole crops. They are also a problem on early potatoes, peppers, turnips, radishes, and even sweet corn. The adults are active leaf-feeders that can, in large numbers, rapidly defoliate and kill plants. Symptoms of flea-beetle feeding are small, rounded, irregular holes; heavy feeding makes leaves look as if they had been peppered with fine shot. Cultural controls for this insect include perimeter trap crops using highly attractive mustards, row covers, and the use of transplants which can tolerate greater levels of damage. Specific insecticides containing spinosad, plus bifenthrin and permethrin can provide good control for about a week. Applications of insecticides containing imidacloprid (e.g. Provado) or thiamethoxam (Actara) can also provide good control for some selected species However, to protect seedlings, applications usually must be reapplied often. The plants produce continuous new growth and the highly mobile beetles may rapidly reinvade plantings. As with all pesticides, carefully read and follow all label directions.

Crucifer flea beetle on kale

Variegated Cutworm – Migrating populations of the variegated cutworm have recently been detected throughout much of Wisconsin extending as far north as Iron and Bayfield Counties. The variegated cutworm typically overwinters in states to the south of Wisconsin. Moths migrate to the region during the spring and early summer. There are multiple generations of this cutworm, often two to three, depending on prevailing environmental conditions. With early flights this year and above average temperatures throughout much of the state during the spring, populations can be expected to be above average. The most distinguishing characteristic of the variegated cutworm is the 4 to 7 pale yellow, circular spots on the back of the larva. Its general body color is variable, but usually brown to dingy green. The underside of the caterpillar is cream colored and there is a narrow, orange-brown stripe along the side. The adult moths have grayish brown forewings and have a pale oval marking near the wing edge, adjacent to a darker kidney-shaped marking. Nearly all fruits, vegetables and ornamental plants can be damaged by variegated cutworms. Damage is especially common on hosta, petunia and other low growing, "fleshy-leaved" plants. Variegated cutworms large enough to cause noticeable damage are usually at least 1/2 to 3/4 inch long. They eventually grow to be 1 1/2 inches in length. Like other cutworms, variegated cutworms are nocturnal and feeding takes place at night or on very cloudy days, meaning few people have seen the cutworms though many are familiar with the large irregular holes observed later.

Variegated cutworm larvae

Potato leafhopper – Adult potato leafhopper (PLH) continue to immigrate into southern and central Wisconsin, arriving over the last week on strong southerly winds in advance of cold fronts. Populations of adults are still somewhat low and sweep net counts in alfalfa are averaging < 0.3 adults / sweep at the Arlington Agricultural Experiment Station. Recall, however, that these insects have a broad host range attacking alfalfa, snap beans, and potatoes, to name only a few. They feed with sucking mouthparts similar to mosquitoes and remove plant sap directly from the phloem and cause damage by injection of a salivary toxin that causes cell disruption. Once populations have been observed, fields should be scouted regularly using standard sweep net sampling. Recommended treatment thresholds are 1 adult per sweep with a net or 15 nymphs on the undersides of 50 potato leaves.

Potato – Overwintering Colorado potato beetle (CPB) adults have been prevalent in the Central Sands region for the past 3-4 weeks as a result of the warmer temperatures experienced in late March and early April. These adults are now rapidly colonizing from their overwintering sites adjacent to previously planted potato as several fields are now emerging from hilling. Pay close attention to these colonizing populations to see if the at-plant systemic neonicotinoids remain effective. At the current time, we should be experiencing high concentrations of the neonicotinoids in newly emerging plants which 'should' provide very good control of early season adult beetles and any newly hatched larvae. Full rates of the neonicotinoids (e.g. Platinum, Belay, AdmirePro) should continue to be effective in controlling these larval populations if no product resistance has become established. If you notice widely distributed, in-field populations of adults and early larvae continuing to persist and feed in plant terminals, it is important to consider foliar applications to minimize the threat of the second generation of CPB. The performance of the at-plant neonicotinoids continues to 'slip' at selected field locations in the Central Sands. This 'early breaking' may (out of necessity) require an additional application of a foliar insecticide to achieve adequate first generation control. If you do observe insufficient control, or suspect encroaching levels of resistance to the neonicotinoids, it may be necessary to consider perimeter foliar applications with the reduced-risk product, novaluron (Rimon®). This material has the unique activity of targeting not only eggs, but early instar larvae. In fact, it has been shown that adult female CPB that ingest novaluron-treated foliage will lay eggs that are non-viable. As a result, now is the time to consider this 1st generation application to ensure good control. A second application will likely be necessary in 7-10 days following the initial application to provide more complete control of the 1st generation.

Vegetable Entomology Webpage: http://www.entomology.wisc.edu/vegento/index.html